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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,096	01/16/2004	Lalit K. Mestha	116588	4982
27074 7590 12/31/2007 OLIFF & BERRIDGE, PLC. P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
			EXAMINER LEE, WILSON	
			ART UNIT 2163	PAPER NUMBER
			NOTIFICATION DATE 12/31/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction27074@oliff.com  
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## Office Action Summary

Application No.

10/758,096

Applicant(s)

MESTHA ET AL.

Examiner

Wilson Lee

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10/15/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-18 is/are allowed.
- 6) ☒ Claim(s) 1 and 4-6 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

### **Claim Rejections – 35 U.S.C. 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viassolo et al. (6,587,793) in view of the terms definition cited in Microsoft Press Computer Dictionary.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding Claim 1, Viassolo discloses

a method of partitioning a reference database (172) (fig. 1) for determining a reflectance spectrum (reflectance spectra) (Col. 2, lines 60-69; Col. 4, lines 20-50; Col. 8, lines 41-56), comprising:

establishing a plurality of clusters (fig. 3);

identifying, for each training sample of a plurality of training samples (Col. 3, lines 39-46; Col. 4, lines 10-28; Col. 8, lines 15-30; Col. 8, lines 41-56), a most

appropriate cluster (cluster used appropriately) among the plurality of clusters (Col. 9, line 21 to Col. 10, line 13) and

assigning each training sample (entering training samples and obtaining cluster centers for reconstruction) to the most appropriate cluster (Col. 8, lines 15-40; Col. 14, lines 1-42; and Fig. 5), each training sample correlating a reference spectrum with a corresponding plurality of normalized illuminant sensor (LED sensor) outputs (normalized with a white title) for reference colors (Col. 3, lines 8-49; Col. 7, lines 1-20; Col. 9, lines 21-38; Col. 12, lines 45-55).

As discussed above, Viassolo does not explicitly disclose the clusters are initially empty, and then filled by assigning the training samples to the cluster, however, a empty cluster for filling training samples does not render any novelty.

As defined by Microsoft Press computer dictionary 3<sup>rd</sup> edition, "cluster" is a group of storage segments or sectors. Typically, a cluster consists of two to eight sectors, each of which holds a certain number of bytes (characters). Each "sector" is a portion of data storage on the disk which holds 512 bytes of information apiece. Since each cluster may have two sectors that could hold only as small as 1024 bytes of information, it is reasonably believed that the clusters in Viassolo are initially empty before the information of the training sample is assigned thereto. Otherwise, the cluster would not be able to hold any information.

Therefore, it would have been obvious to one of ordinary skill in the art to have realized that Viassolo's clusters would have been initially empty if the invention were used at the very first time thereupon the memory space must be

free or empty in order to receive or hold the assigned information. Further it would have been to one of ordinary skill in the art to empty out the clusters in Viassolo initially before the training samples being assigned in order to render quicker speed in the storing process.

Regarding Claim 4, Viassolo discloses that the establishing the plurality of clusters comprises establishing a plurality of cluster centroids (cluster center) (Col. 9, line 21 to Col. 10, line 13 and Fig. 2); the cluster centroids being established through vector quantization (each triangle shows a vector formed by dots that determines the cluster center) (fig. 2).

Regarding Claim 5, Viassolo discloses that a reference database partitioned by the method, the reference database being machine-readable (obtain samples from reference database; LED readings) (Col. 3, lines 39-46; Col. 12, lines 55-62).

Regarding Claim 6, Viassolo discloses that a storage medium on which is recorded a program for implementing the method (Claim 28 of Viassolo).

### **Response to Arguments**

Applicant's arguments with respect to claims 1-6, 15-18 have been considered but are moot in view of the new ground(s) of rejection.

### **Allowable subject matter**

Claims 2 and 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 15-18 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art neither discloses nor suggests the following limitation in combination with the remaining elements as disclosed in claim 15:

The step of identifying of the most appropriate cluster comprises obtaining, for each training sample, a Euclidean distance from the training sample to each of the cluster centroids, such that a plurality of Euclidean distances are determined for each training sample.

The closest reference Viassolo teaches most of the invention but does not specifically disclose the usage of identifying Euclidean distance from the training sample.

Proper motivation has not been found in any reference to combine teachings for disclosing the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is

filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### **Correspondence**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Wilson Lee whose telephone number is (571) 272-1824.

Papers related to the application may be submitted by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT".

The official fax number is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Wilson Lee', is written over a horizontal line.

Wilson Lee  
Primary Examiner  
U.S. Patent & Trademark Office

12/20/07